

## United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,366	07/11/2002	Udo Pursche	P/63002-PCT	1748
156 75	590 02/09/2005		EXAMINER	
KIRSCHSTEIN, OTTINGER, ISRAEL & SCHIFFMILLER, P.C. 489 FIFTH AVENUE NEW YORK, NY 10017			LUU, AN T	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Brauns reference (U.S. Patent 5,900,747).

Brauns discloses in his sole figure an apparatus comprising at least two series-connected diodes (D1, D2); a repeating coil (transformer Tr) for feeding a reference signal (fr) to the diodes; a decoupling network (R1, R2, C3, C4) via which an input signal (fo) is placed on the diodes, and an output signal (fd) is tapped off the diodes; and reactances (Rs1, C1, L1, Rs2, C2, L2) between the diodes and the repeating coil for balancing respective voltages on the diodes as partially required by claim 4.

Brauns does not disclose the reactances being adjustable as specifically required the claim. However, it would have been obvious to one skilled in the art at the time the invention was made to replace reactances with adjustable reactances since reactances is known to come various sizes and/or values.

A skilled artisan in the art would have been motivated to do the above substitution since adjustable reactances can provide further control so as to offset other circuit component induced non-linearities so as to enhance the linearity performance of the circuit.

As to claim 5, the sole figure shows the decoupling network comprising resistors,(R1, R2) and capacitors (C3,C4).

As to claims 6-9 and 12, the sole figure working resistors (Rk1, Rk2) connected in series with the diodes, both working resistors being connected together at a connection point with a fixed potential (i.e., GROUND), and feed lines between the repeating coil and the diodes (i.e., line having Rs1, L1, Ck1 and line having Rs2, L2, Ck2), each feed line having at least one of the reactances therein and being connected between a respective diode and a respective working resistor.

As to claim 11, coil Tr of the sole figure is shown as a transformer.

As to claim 10, Brauns does not disclose an adjustable transformer as required by the claim. However, it would have been obvious to one skilled in the art at the time the invention was made to incorporate an adjustable transformer into the teachings of Brauns to enhance range and/or capability of the teachings since adjustable transformer is a known device. A skilled artisan in the art would have been motivated to utilized the adjustable transformer for the benefit of being used for controlling the amplitude of the voltage such that the above apparatus can be applicable with a wider range of input signal.

## Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Application/Control Number: 10/088,366 Page 4

Art Unit: 2816

Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu 2-3-05

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800